



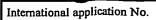


# **PCT**

#### INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P803435/WO/1	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)				
International application No. PCT/DE2003/002013		rnational filing date (day/month/year) Priority date (day/month/year) 16 June 2003 (16.06.2003) 18 June 2002			
International Patent Classification (IPC) or no B29C 67/00	ational classification and IPC				
Applicant	DAIMLERCHRYS	LER AG			
<ol> <li>This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</li> <li>This REPORT consists of a total of6 sheets, including this cover sheet.</li> <li>This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule</li> </ol>					
	Administrative Instructions until tal of sheets.	ider die 1 C1).			
3. This report contains indications relating to the following items:  I Basis of the report  II Priority  III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  IV Lack of unity of invention  V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement  VI Certain documents cited  VII Certain defects in the international application  VIII Certain observations on the international application					
Date of submission of the demand	Date	of completion	of this report		
16 December 2003 (16.12.2003)		09 June 2004 (09.06.2004)			
Name and mailing address of the IPEA/EP		Authorized officer			
Facsimile No.		Telephone No.			



## PCT/DE2003/002013

#### · INTERNATIONAL PRELIMINARY EXAMINATION REPORT

I.	L. Basis of the report							
1.	With	regard to	the elements of the international application:*					
		the international application as originally filed						
	$\boxtimes$	the desc	cription:					
		pages	1-11 , as originally filed					
		pages	, filed with the demand					
		pages	, filed with the letter of					
	$\boxtimes$	the clair	ms:					
		pages	3-6 , as originally filed					
		pages	, as amended (together with any statement under Article 19					
		pages	, filed with the demand					
		pages	1-2 , filed with the letter of 18 May 2004 (18.05.2004)					
	$\boxtimes$	the drav	wings:					
	<u></u>	pages	1/1 , as originally filed					
		pages	, filed with the demand					
		pages	, filed with the letter of					
	$\Box$	he seave	nce listing part of the description:					
	ш,	pages	, as originally filed					
		pages	, as originarly fried , as originarly fried , filed with the demand					
		pages	, filed with the letter of					
	2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.  These elements were available or furnished to this Authority in the following language							
			gether with the international application in computer readable form.					
		furnish	ed subsequently to this Authority in written form.					
	Ц	furnish	ed subsequently to this Authority in computer readable form.					
The statement that the subsequently furnished written sequence listing does not go beyond the disclosure is international application as filed has been furnished.								
		The sta	atement that the information recorded in computer readable form is identical to the written sequence listing has arnished.					
4.		The am	nendments have resulted in the cancellation of:					
			the description, pages					
			the claims, Nos.					
			the drawings, sheets/fig					
5.			port has been established as if (some of) the amendments had not been made, since they have been considered to go the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**					
*	* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).							
**	** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.							

International	cation No.
PCT/DE	03/02013

v.	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
	citations and explanations supporting such statement

		<u> </u>		
1.	Statement			
	Novelty (N)	Claims	1-6	YES
		Claims		NO
	Inventive step (IS)	Claims	1-6	YES
	,	Claims		NO NO
,	Industrial applicability (IA)	Claims	1-6	YES
		Claims		NO ·

#### 2. Citations and explanations

- This report makes reference to the following documents:
  - D1: EP-A-0 897 745 (MIKUNI KOGYO KK; MATSUSHITA MITSUHIRO (JP)) 24 February 1999 (1999-02-24)
  - D2: US-A-5 902 441 (BREDT JAMES F ET AL) 11 May 1999 (1999-05-11).
- 2.1 D1 discloses a particle "suitable for" producing a three-dimensional article by means of a method involving the build-up of layers (see figures 5 and 6 and claims 79 and 80), having:
  - a core made of at least one first material
     (see claim 1),
  - a first coating of the core with a second material (see claim 1) that is polar (see paragraphs [0040] to [0044]),
  - a second coating on the first coating (see claims 28 and 78, figure 4 and paragraph [0104]),

from which the subject matter of claim 1 differs in
that:

the thickness of the first coating corresponds to 0.1 to 10% of the average particle radius, and

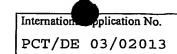
- the second coating is made of a surfactant the thickness of which corresponds to a monolayer of the surfactant.

Therefore, the subject matter of claim 1 is novel (PCT Article 33(2)).

- 2.2 Consequently, the problem to be solved by the present invention is that <u>the components produced</u> have an uneven <u>surface</u>.
- 2.3 None of the cited documents discloses or renders obvious the above-mentioned solution, namely the use of a particle in which
  - the thickness of the first coating corresponds to 0.1 to 10% of the average particle radius, and
  - the second coating is made of a surfactant the thickness of which corresponds to a monolayer of the surfactant.

Therefore, the subject matter of claim 1 is inventive (PCT Article 33(3)).

- 2.4 Claim 2 is dependent on claim 1 and therefore likewise meets the PCT requirements for novelty and inventive step.
- 3.1 D2 discloses a method for producing a threedimensional article, involving the following steps:
  - applying a layer of particles to a target surface (see column 5, lines 13-29),
  - printing on a selected portion of the layer that corresponds to a cross-section of the article with a liquid in which at least some of the particles are soluble such that the particles bond in the selected portion (see



column 6, lines 24-43),

repeating the application and printing steps for a plurality of layers such that the bonded portions of the adjoining layers bond together to form the article (see column 6, line 67 to column 7, line 18),

from which the subject matter of claim 4 differs in that particles are used to the outer surface of which a surfactant has been applied.

Therefore, the subject matter of claim 4 is novel (PCT Article 33(2)).

- 3.2 Therefore, the problem to be solved by the present invention is that the components produced have an uneven surface.
- 3.3 None of the cited documents discloses or renders obvious the above-mentioned solution, namely the use of particles to the outer surface of which a surfactant has been applied.

Therefore, the subject matter of claim 4 is inventive (PCT Article 33(3)).

- 3.4 Claim 5 is dependent on claim 4 and therefore likewise meets the PCT requirements for novelty and inventive step.
- 4.1 D2 also discloses a method for producing a threedimensional article, involving the following steps:
  - applying a layer of particles to a target surface,
  - irradiating a selected portion of the layer that corresponds to a cross-section of the article by means of an energy beam such that

the particles in the selected portion bond, repeating the application and irradiation steps for a plurality of layers such that the bonded portions of the adjoining layers bond together to form the article (see column 1, line 51 to column 2, line 4),

from which the subject matter of claim 4 differs in that particles are used to the outer surface of which a surfactant has been applied.

Therefore, the subject matter of claim 4 is novel (PCT Article 33(2)).

- 4.2 Therefore, the problem to be solved by the present invention is that the components produced have an uneven surface.
- 4.3 The subject matter of claim 3 is regarded as inventive (PCT Article 33(3)) for the same reason as in point 3.3.
- 5. The subject matter of claim 6 is regarded as novel and inventive (PCT Article 33(2) and (3)).
- 6. The subject matter of claims 1-6 is industrially applicable (PCT Article 33(4)).